

Claims

1. An injection device (1) comprising in particular  
5 an injection nozzle (3) and a glass tube (50) intended to receive an active substance (53) to be injected, said tube (50) being fixed to said nozzle (3) with the aid of connecting means, the connecting means comprising at least three  
10 identical bosses (33) which are integral with the nozzle (3), said bosses (33) each comprising an inclined part (330) which is terminated by a flange (331), said flange (331) cooperating with a collar (55) which is formed on the tube (50) and is situated at one of the ends of the tube (50), said collar serving as a anti-return element for  
15 the tube (50) when the latter is connected to the nozzle (3), said device being characterized in that the bosses (33) are connected to one another by connecting branches (34).  
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2. The device (1) as claimed in claim 1, characterized in that the inclined part (330) of the bosses (33) is inclined in the direction of  
25 the nozzle (3) and toward the inside of the nozzle (3).  
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3. The device (1) as claimed in claim 1, characterized in that each boss (33) is inwardly curved, the bosses (33) being inscribed in a same circle whose diameter is substantially equal to the external diameter of the collar (55) of the tube (50).  
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4. The device (1) as claimed in claim 3, characterized in that the angle of opening defined by the two segments joining the center of the circle to the ends of each inwardly curved boss

(33) is between 17 and 23 degrees.

5. The device (1) as claimed in one of claims 1 through 4, characterized in that the bosses (33) are spaced apart from one another at regular intervals.
10. The device (1) as claimed in one of claims 1 through 5, characterized in that the nozzle (3) has a flat surface (301), the bosses (33) being situated at a non-zero distance from said surface (301), the space between the flange (331) of the bosses (33) and said surface (301) substantially corresponding to the thickness of the collar (55) of the tube (50).
15. The device (1) as claimed in one of claims 1 through 6, characterized in that the end of each of the bosses (33) has a rounded shape (332).
20. The device (1) as claimed in claim 7, characterized in that the diameter of the circle is 13.2 mm, and in that the rounded shape (332) has a radius of 0.1 mm.
25. The device (1) as claimed in one of claims 1 through 8, characterized in that each boss (33) is supported by a rod which is fixed to the nozzle (3) and is able to deform elastically.
30. The device (1) as claimed in claim 1, characterized in that the connecting branches (34) have a height of 1.4 mm.
35. 11. The device (1) as claimed in claim 1 or 10, characterized in that the bosses (33) are supported by the connecting branches (34), said connecting branches (34) being made integral with the nozzle (3) by means of connecting blocks (32)

and being connected to one another so as to define a substantially circular crown (31) whose diameter is substantially equal to the external diameter of the collar (55) of the tube (50).

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12. The device (1) as claimed in claim 11, characterized in that the nozzle (3), the bosses (33), the connecting branches (34) and the connecting blocks (32) are made as one piece.

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13. The device (1) as claimed in claim 12, characterized in that the piece is made from polycarbonate.